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THE SPORT OF TRAPSHOOTING



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Information for Shooters

Hints for Organizing

and

Conducting Gun Clubs

WINCHESTER TRADE MARK

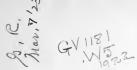
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The Trapshooter at Play. Three Squads are Shooting on the Picturesque Grounds of the Clairton, Pa., Gun Club

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The Sport of Trapshooting

O naturalist discovered the clay "bird". Like many other good things of the earth, it was invented in America.

For more than forty years this inanimate, mechanically propelled, swift and fragile little flying target has afforded keen sport with the gun for thousands of virile men and women the length and breadth of the land. Every day in the year trapshooters with levelled guns are calling for its catapult flight from its roosting place in gun club "trap-houses."

"Pull!" That's the call of the shooter.

The puller pulls.

Out of the open trap-house, propelled by the strong "trap," darts a speedy clay target—skimming, soaring,

Bang! Hit or miss. The thrill of satisfaction or of

disappointment is there.

That's trapshooting, the sport that holds everybody through its fascination—the sport few sportsmen ever forsake.

How Trapshooting Started

THE motive behind trapshooting is as old as the human race. It is the instinctive human desire to hurl missiles at targets, which men have had ever since they have been able to hold any object in their hands.

When bow and arrow supplanted the sling of antiquity the same human instinct was satisfied in a different way—the hand and eye directed the missile though the hand did not propel it.

Back in 1831, when American sportsmen were beginning to develop interest in wing shooting, a few of them started a club in Cincinnati, then the metropolis of the Great West. To do it in good style, they sent over to England and got blue rock pigeons, such as the English gentry of the day were shooting.

Pigeon shooting gradually became popular. Shooting clubs were organized in various parts of the country. Famous matches were shot with big crowds in attendance. The sport developed its official rules and nomenclature and numbered its enthusiasts in every state and territory. In addition to the domestic blue rock pigeons, matches were shot at American wild passenger pigeons, at English sparrows and at crows.

Then came the invention of the glass ball and the mechanical "trap" used for giving it flight. Numerous types of both were soon in use. These balls were the first inanimate substitutes for pigeons, and they attain-

ed wide popularity in the 70's.

However, none of the glass balls satisfactorily simulated the flight of a bird, and the first really successful substitute was not found until George Ligowsky, of Cincinnati, invented the original clay target, which the targets of present-day trapshooting closely resemble. Along with his target, Mr. Ligowsky produced a practical ground trap for throwing it.

The Ligowsky target and trap, first perfected in the early 80's, gave trapshooting as we know it today its real start. Substitutes and improvements soon came,

THE STANDARD TARGET



Weight ¾ oz.
Diameter 4¼ inches.
Height 1¼ inches.
Height for rim 1½ inches.

but the "clay" target in present use, even though no longer made entirely of clay, and the trap that throws it, have not been altered in principle.

The Sport for Everybody

TRAPSHOOTING has, of recent years, firmly established itself as one of the most popular of American outdoor competitive sports. This is easily understood when the wide range of its appeal is considered.

Trapshooting is an outdoor sport in the biggest, broadest sense of the term. It combines more individual attractions, insures more lasting benefits, than most

other sports.

With the ever increasing love for outdoor recreation, the Gun Club has become a social center—the gathering place for the local group of kindred spirits who are a part of a vast national fraternity that is gaining in breadth each year.

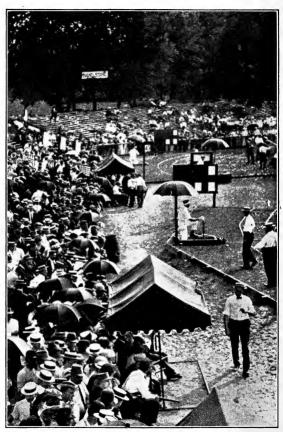
Trapshooting numbers among its votaries men of all ages and every sphere of life. It appeals no less to the busy merchant or the professional man who can seize but an hour or two a week to exercise and play at his favorite game, than it does to the man of leisure.

To the hunter it calls forth happy thoughts of days he has spent afield and puts him at once in practice for

other such days that are still to come.

It is for women as well as men. In this day of greater achievement we are *all* men in the sense of the *doing* of things. And the woman of today is realizing more than ever before the wide range of her capabilities. Trapshooting offers a brand new field for the development of her talents.

Her courage and confidence are inspired, her health and happiness improved, through indulgence in trap-



Public interest runs high at tournaments. Part of the crowd at a Grand American, in Dayton, Ohio

shooting. And it has been well proved that a woman can be as proficient at this sport as a man.

Trapshooting is a boy's game, too. Every American boy in his teens should be taught to shoot. It is a duty we owe to him, ourselves, and the nation.

Trapshooting stimulates youthful ambition, while it satisfies it. It lays the foundation for that self-confidence which is vital to success.

Always in Season-Wherever You Are

ONE of the most attractive features of trapshooting is its availability. Enjoyment of the sport is not confined to the Gun Club alone. The enthusiast is not dependent on any one time or place for the indulgence of his hobby.

The universal demand for trapshooting has resulted in its adoption in Country Clubs, Yacht and Golf Clubs, Hotels, Parks, Colleges, Prep Schools, Boys' Camps, etc. The most prominent summer and winter resort hotels have installed elaborate shooting grounds for the entertainment of their guests.

It matters not where one lives or journeys, a chance to shoot is always somewhere close at hand. Wherever a few trap-shooters get together, a "shoot" is sure to develop. The lure of the sport is always in the air.



Winchester Folding Hand Trap Made in Two Sizes

Remember there is no closed season for the fast-flying clays—no protection zone—no limit set on the bag.

A New and Simple Clay Target Hand Trap

A HANDTRAP for the throwing of clay targets that combines the greatest simplicity with the most practical results has been designed by J. Mowell Hawkins, head of the Winchester Shooting Promotion Division. The simplicity and low cost of this new handtrap make it not only easy to operate, but easy for shooters with very modest means to equip themselves for hand target throwing.

All this new trap requires is a strip of quarter inch wood, $2\frac{1}{2}$ inches wide and 16 inches long fitted with a quarter inch strip of the same length and three-quarters of an inch wide which is nailed along the side and projects up as a ledge just the height of the outer rim of the target.

A comfortable hand grip should be formed at one end. Then the target is placed cup down on the board with its rim resting against the back strip, up near the hand but not close enough to touch the thumb or any part of the hand

In throwing the target the best results are obtained by giving the trap a slight pulling motion against the rim of the target as the swing is made.

This trap can be used with either hand which, incidentally, makes it the first hand trap made for use with the left hand.

One of these traps can be readily made from the ends or sides of a target barrel but, of course, it is better to have the finished product made out of light, smooth material.



All this new trap requires is a strip of quarter inch wood, 2½ inches wide and 16 inches long fitted with a quarter inch strip of the same length and ¾ of an inch high which is nailed along the side and projects up as a ledge just the height of the outer rim of the target

One big advantage the new Hawkins trap has over others now in use, aside from its simplicity and low cost, is the perfect control of the target which it gives and the accuracy and manner in which the target can be thrown. It allows throws of five feet or 300 feet, high or low, broadside or edgewise and in any direction at the thrower's will.

How To Organize A Club

THE chances are that in every neighborhood a certain number of lovers of the gun and the free outdoors would welcome the idea of a Gun Club. Individually, they have thought of it—half planned it out a dozen times in their minds. It has only needed a leading spirit, someone to give the idea the starting push, and Bang!—the thing would be done.

Let us suppose that you have foreseen the possibilities of a Gun Club in your town. You are sure to have friends who feel like yourself—men and women who would love to get in line and whang away at the flying

clays.

Get them together. Spring the Big Idea—and talk it over at length. Tell them what enjoyment and downright benefit is in store for them, once your club—their club—is launched and the sport has fairly begun.

Let them see it all clearly through your eyes—the advantage to be gained from the standpoint of health—the satisfaction that comes through the "knowing how"—the fascination that, in trapshooting, holds all men alike. They will see it—and once they do you can count on their hearty support.

Making a Start

THE first step should be to get a few earnest workers to actively cooperate in making a start. This done, your subsequent campaign for members is considerably simplified. Have everyone who is interested try to interest someone else. Get your local newspaper interested—have it publish an announcement that a Gun

Club is about to be organized, and that prospective members will be heartily welcomed. Get the dealers interested and have them place signs in their windows—"Do you wish to join the Gun Club? Step in."

Presuming that you have received enough encouragement to continue, the next step will be to call a meeting. You should notify all who have evinced an interest in the proposition, together with any others, who, you think, may also become interested.

As you have been the prime mover thus far, and are, doubtless, best informed as to the feasibility of promoting a Gun Club, call this meeting to order yourself.

State your proposition briefly and emphatically. If you have in mind a suitable location for your Gun Club, tell about it at once.

Lay stress on the need of a Gun Club—the many purposes it fills—the opportunities it furnishes for enjoyment, the promotion of health, good fellowship, and practice and competition in the fine sport of wing shooting, the greatest practice for the trip afield.

After you have outlined the plan in a few words, a temporary Chairman should be elected. Let the question of organizing the Gun Club be placed before the meeting and have your original information and general details discussed and amplified.

Selection of Officers and Committees

ORGANIZE your Gun Club on the spot—at the least take the first steps toward perfecting an organization. Officers should be elected and several committees appointed at this meeting. The customary officers are: President, Vice-President, Secretary, Treasurer, and Field Captain—all to be elected by popular vote.

Committees on Grounds, Constitution and By-Laws,

Purchase and Supply and Program, should be selected. It will be their duty to look into details in these various fields and report at your second meeting.

Be careful to select your officers with due consideration of their individual qualifications. Your secretary,



Jimmy Bonner, of New York City, the 13 year old boy who tied for the Junior Championship at the 1921 Grand American

with whom, necessarily, will rest the greatest responsibility, should be an enthusiast, a hard worker, and an all-around good fellow. A popular secretary *makes* a club—and a grouch can easily spoil one.

The matter of committees is also important. They should be chosen with discretion; the individual mem-

bers all qualified for their duties.

Now let us assume that your club was organized at the first meeting. Your officers were elected, your committees chosen, and their different duties assigned. Finally, a date was set for your second meeting.

Initiation Fee and Dues

THE question of initiation fee and dues, if not already arranged, should claim immediate attention at this meeting. These should be made as reasonable as possible. Supposing your club to have a membership of thirty or forty, it is probable that an initiation fee of \$5.00 and yearly dues of \$2.00 will finance it satisfactorily.

If this sum is insufficient to defray preliminary expenses, fix on some plan for securing the additional money. A working capital is necessary before you can

make a start

Shooting Grounds

TAKE up the matter of shooting grounds if this question is still unsettled. Your committee should report its findings, and every effort should be made to

acquire a location at once.

Bear in mind, in this connection, that accessibility is of primary importance. Your grounds should, if possible, be located within easy walking distancesay one-half mile to a mile from the central point of your town, or close to a street-car line. Suggestions for the selection and lay-out of grounds will be found on other pages of this booklet.

In the natural order of things your "Constitution and By-Laws" should be read and approved at this meeting. A simple form of constitution and by-laws may be

found commencing on page 66.

Your committee on "Purchase and Supply" has investigated prices of traps, shells, targets, etc. Its report will be of interest at this particular time. Take up the discussion of these prices and plan means for purchasing to the best advantage. See local hardware dealer.

Your club is now an actuality. Your endeavors and those of your fellow-workers have brought together a nucleus of earnest shooters. They may be few in number, but never mind; provided the timber you start with is solid, you can build with confidence.

Incorporation

IT is not unusual for a Trapshooting Club to desire incorporation, especially when property is to be permanently acquired. This may be accomplished at a nominal cost, and is a good protective measure.

Publicity

REMEMBER that a full membership is your guarantee of success. Plan a vigorous campaign for adding to your initial list. It is through the newspapers that you will reach the greatest number of prospects, now that your club is "on the map". It is through the press, moreover, that you will hold the interest which is vital to every club.



General Pershing at the traps at one of Uncle Sam's army posts at LeMans, France

How To Shoot

THAT the crack shot is "born and not made" is only a theory. It finds contradiction in the record of many a novice who learns to outshoot his early scores, climbing up from the tail end of Class D to a creditable Class A rating.

Some of these have advanced to the very front rank at a surprisingly rapid rate. Others are constantly

forging ahead to enviable places.

Not a few of the best known shots of the day are men who were past the prime of life when first they faced the traps.

A zest for rivalry—the inborn determination not to be outdone by friend or foe—this is the American's birth-right—this is the power behind the gun that makes for better scores.

Trapshooting, in common with all sporting contests of skill, is best learned by actual practice. Much can be gained, however, by studying the methods of successful shooters. Any normal man or woman who masters the fundamentals of this sport can soon learn to shoot at least reasonably well.

The following suggestions, compiled out of the experience of the country's leading trapshooters, will

be found helpful to beginners.

Selecting the Gun

OBVIOUSLY, the most important point for the trapshooter's consideration is the gun. On its choice depends much of the pleasure and success of his days at the traps.

The principal things to be considered in choosing a trap gun are: durability, dimensions of stock, length of barrel, mechanical strength, balance and general feel of the gun. Durability is the chief factor in the gun's good behavior, and only a gun that it is known will stand years of hard usage should be selected; for one naturally wants a gun that will still be useful after one learns to shoot it. The 12-gauge is standard, and the popular boring is 70 to 75 per cent choke.

This is why the Winchester is the most popular gun for trapshooting. It stands the wear and tear and at the same time is an all-around gun, adapted for both singles and doubles, also for duck and field shooting.

The best guns are not always the most expensive. Fancy finish and elaborate engraving may make a gun more attractive, but never a *better* gun.

Fit of the Gun

HAVING determined the proper type of gun for the traps, it is essential to find one that "fits" you properly. Handle a number of guns, and if possible, try them out at the traps. It will help you to determine your exact requirements.

The question of fit means the proper dimensions; that is, the drop of the heel of the butt below the line of sight, the drop at the comb, and length of stock. You may require a very straight stock—or one with more than the average drop. Your physical make-up governs the matter of which particular gun will "feel" and handle best in your hands—this and your shooting habits. Some require one dimension, some another; there is no definite rule, except that for trapshooting one usually does best with a slightly straighter stock than one would choose for field shooting.

An approximate fit is all the novice can expect. The basic principle is to bring the sights in alignment with the eye accurately and quickly. The shooting high or low of a gun is determined mainly by the manner in which the sights are adjusted or in which the rib is placed, in relation to the barrel. To illustrate this, take a front sight of $3\!\!\!/_{\rm B}$ inch above the inside of barrel at muzzle, then by lowering the barrel, or raising the alignment at the breech or receiver, in other words the rear end of rib, you make the barrel point higher which naturally makes the gun shoot higher.

The straight gun is one which is built with a high comb which does not permit the eye to come down to the rear of rib. Consequently the alignment is above the rear of rib, the barrel pointing high, and the load



has to go high. Many shooters govern this by their cheek, light pressure when desiring the load to go high and hard pressure when the load is to go low. The difficulty with this method is that it is very likely to cause cross-firing, and again, it is very unreliable when any of the numerous troublesome and varying light conditions or mirage are encountered.

The Touch of the Cheek

THE straight built gun is not much better than the above for the shooter is compelled to judge how far to hold under certain targets and is handicapped greatly in the above mentioned light conditions. This judgment or calculation in regard to the place to aim according to the flight of the target is minimized by having the stock made so that the eye comes in perfect alignment with the sights, the front sight being silhoutted between the shoulders or in the groove of the rear sight as the gun touches the cheek, and too much importance cannot be placed on this touch for when you can close your eyes and put your gun up and tell by the "touch of the cheek" that your eye is in perfect alignment with the sights, then you may, with reason, assume that your gun comes pretty close to fitting. The eye should photograph the position of the sights and never should the trigger be pulled until this position can be seen. In aiming this position should be held and the spot to aim decided upon the instant the target appears and the gun pushed to this spot without disturbing this position or alignment of sights. Your gun should fit so that you can hold this position of sights or alignment and secure it instantly, and with your eyes closed.

Care should be taken to have your stock for target shooting long enough so that, when putting the gun to the shoulder and pointing at an angle of 45 degrees



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Fig. 3

above a line with the shoulder, the fingers of the right hand are about $1\frac{1}{2}$ inches from the nose and the sights are properly aligned. (Figure 1.) Try this with your eyes closed before putting the gun up. Place the gun where you think it belongs upon your shoulder and put your face where you think it belongs upon the comb keeping the eyes closed all the while. Then bring the gun down to a line with the shoulder as shown in Figure 2. Then open your eyes. (Figure 3.) If you have the sights aligned your gun is at least a 90 per cent fit, also you have the proper position and are ready to call, "Pull".

Drop of Stock

THE "drop" of a gun is measured at two separate points—the "heel" and the "comb". To ascertain this drop lay a straight edge along the barrel having it project to the end of the stock. Measuring the distance from the heel of stock to the straight edge as in A A in diagram below gives the "drop at heel." In similar manner, measuring from the comb of the stock to the straight edge, B B, gives the "drop at comb."



The popular demand is supplied with great success by the standard stock dimensions of the Winchester Tournament and Trap Guns. These are as follows: Tournament grade: length of stock, 14 inches; drop at comb, 1% inches; drop at heel, 1¾ inches. Trap grade: length of stock, 13% inches; drop at comb 1% inches; drop at heel, 1% inches.

The Winchester Ventilated Rib Tournament Gun, length 14 inches, comb $1\frac{1}{2}$ ", heel $1\frac{3}{4}$ ". Trap gun, length 14 inches, comb $1\frac{1}{2}$ ", heel $1\frac{3}{4}$ ".

Length of Stock

THE length of a gun stock is measured from the trigger to the central edge of the butt plate; also from the trigger to the heel and to the toe, as the latter two dimensions determine the pitch of the barrel. (See C D and C E in the diagram on Page 21.)

Another way to determine the pitch is to stand the gun flat upon the butt, on a level floor, with its breech against an absolutely perpendicular wall, and measure the distance from the wall to the barrel at the muzzle. The floor or whatever the gun stands upon must be exactly at a right angle to the wall. If the barrel points down or away from the wall the gun is pitched down; if the barrel muzzle but not the breech touches the wall it pitches up. There is no standard pitch for trapshooting, for what is required usually depends upon the manner in which the shooter holds his gun to his shoulder, also his position in shooting. The best pitch for most beginners is 3/4 inch down.

The thickness of the stock is one of the most important features to be considered—to the veteran shooter perhaps the most important. It must be thick or thin according to the slant, thickness and firmness of flesh of the shooter's cheek and the position of his eye. However, the proper thickness is not difficult to determine, as compared with the best drop and pitch—at least not until one gets to the point of correcting one's shooting faults by altering stock dimensions. For it is easy to tell if the gun lines up properly when

the stock rests properly against the cheek.

Trigger Pull

THE trigger pull is important, and should be about five pounds for the beginner.

Ammunition

CHOICE of loads adapted to clay targets has narrowed down to two or three. Of these, the one containing 3 drams of "bulk" or 24 grains "dense" powder with 1½ ounces of No. 7½ chilled shot is the best. It would be well for the beginner, however, to adopt a



A squad in action on the trapshooting grounds of the New York Athletic Club

load of $2\frac{3}{4}$ or 3 drams of "bulk" (22 or 24 grains "dense") powder and $1\frac{1}{8}$ ounces of No. $7\frac{1}{2}$ chilled shot, as this gives less recoil and is still a practical trapshooting load.

Position

THE shooter's left foot (provided he is right handed) is slightly advanced. His weight should rest squarely on both feet, with a *slight* forward bend from the hips. There must be careful regard for balance, however, with no tendency toward forward *strain* at moment of firing.

The gun is held with butt pressed firmly to the shoulder, and left hand extended to a point which insures unstrained support and a free lateral swing of the gun. This point will vary with length of arm and individual inclination. The right hand holds the gun firmly at the grip, with index finger lightly pressing the trigger.

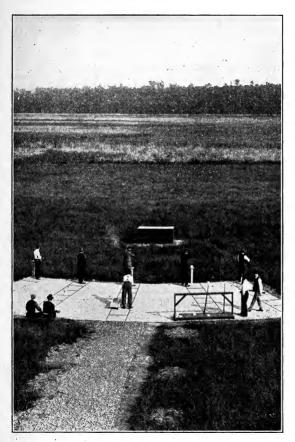
The shooter should assume a position which allows the greatest freedom of movement. Yet in swinging to left or right to shoot at quartering targets he should pivot the whole body, not attempt the movement with

the arms only.

The gun is aligned. The shooter with face slightly raised from alignment, stands motionless, but keenly alert. The instantaneous judgment of flight and where to point the gun is the one thought that should have place in his mind. Standing naturally, his position such that he can swing instantly to left or right, for a sharply quartering target, he is ready to call out his command "Pull."

Alignment

A GUN may be said to be in alignment with the vision when the front sight and the center of the rib closest to the eye are in a direct line with the eye.



At one of the traps of the Oriole Gun Club, Baltimore, Md.

View from the clubhouse

This alignment should be kept in mind, and should be lined up with the spot where your judgment tells you to shoot in order to hit the target.

Both Eyes Should Be Open

THAT the trapshooter should shoot with both eyes open is the opinion of experts the country over. At the beginning of his career it is quite common for the right-shouldered shooter to use the right eye alone, closing the left and aiming at the flying target with scrupulous care. A left-shouldered shooter reverses this order and sights with the left eye alone. In either case, he is slow, shoots late, because he is handicapping himself.

However, when a beginner first tries to keep both eyes open his vision may become confused, which forces him to close one eye. But as he becomes more accustomed to shooting he usually finds that the use of both eyes greatly increases his speed and accuracy.

It has been argued that even when both eyes are open it is the "master eye" alone which actually directs the gun. This is true to a certain extent, but the other eye is of great assistance in locating the target accurately. The avoidance of squinting also lessens the strain on the directing eye.

It is true that a very few successful trapshooters close one eye when shooting, but these are the exceptions. The vast majority find it easier and much more effective to use both.

Aiming

THE expert trapshooter aims at the spot where he wants his shot charge to hit the flying target, and in doing so directs the gun with the hand that grips the

gun-stock, holding slightly up with the other hand gripping the action slide handle or fore-end.

To see your target correctly is the first step; to place your load so that it may meet and break it, the second.

You are not, in actual fact, shooting at the target. You are shooting at the spot which, by rapid calculation, you have decided the target will reach at precisely the same time as the load of shot. In shooting quartering targets this is called "leading."

Each different angle and elevation at which the target is thrown, the direction and strength of wind, and varying light conditions, will require a different calculation—a different amount of "lead." or place to

hold.

Firing Point Rules

THE loading and unloading of the gun while participating in a trapshooting event is regulated by the strictest of rules, which provide for the safety of all concerned and must be rigidly observed.

Extracts from rules:

"A contestant may load his gun only when at the

firing point facing the traps. . . .

"... In single target shooting he shall place only one shell in his gun, removing it or the empty shell before turning from the firing point."

Unwritten laws that are hardly less important than

official rules are:

Remove the shell from your gun if there is an intermission or delay of any kind while you are at the firing line.

Always see that your gun is empty before moving

from No. 5 to No. 1 position.

Never carry a loaded gun about the club house or grounds—or point one, loaded or unloaded, in the direction of anyone.

Leading Targets

By J. Mowell Hawkins

THIS is one of the most important things in shooting moving objects and it is, without doubt, the most intricate subject in connection with shooting. Therefore, it is one that only the experts of the

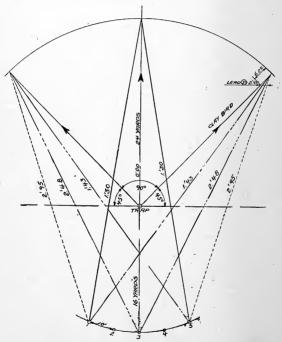


Diagram for leading targets

game can come close to agreeing upon. The great

majority have never figured it out.

Ask a dozen shooters at any tournament just how far they lead a sharp right quarterer and you will get as many different answers, some even saying they do not lead at all, yet what a kick these same shooters put up if a bird happens to vary from the 45 degree angle.

What Leading Target Means

LEADING means getting ahead of the object or intercepting its line of flight no matter whether it is going up or down or a combination of the two which, of course, is the most difficult calculation to make. The only object that does not require a lead is a straight-away that has just reached the crest of its flight or an object thrown straight up which has lost its momentum and for the infinitesimal part of a second apparently hesitates on its yielding of propellation to the influence of gravity and starts upon its return. Therefore, these two occasions are the only times a moving object is the same as a still or stationary target and no lead is required, but mirage, opalescent heat waves, wind or the numerous light conditions should be allowed for just the same, and these vary according to the distance.

In a tournament upon the first Winchester Team trip in 1906 at Vicksburg, Miss., when Bill Crosby was without question the champion of the world, he had broken 197 out of 200 in a strong wind from the left and the sun shining upon the left side of the rib. No one else was within five targets of him and someone asked him how he broke that jumping left quarterer and Bill smiled and said, "Well, I just throw the point of my gun about six feet ahead and two feet above it, shut my eyes and trust to the Lord. If I miss I get just what I ex-

pected when I pulled the trigger, and if I break it, I thank the Lord."

Many Methods used by Shooters

\ \ANY shooters have guns with thin combs and they find they do not have to lead the right quarterers and wonder why they must lead their left quarterers and vice versa with a thick comb. Some overcome this by using a straight gun with thin or thick comb and cant. the gun to the right or left enough to get the benefit of the arc of the trajectory to overcome the lead that would otherwise be necessary and they trust to the natural swing of the gun to carry the shot ahead of the target. There are numerous combinations that shooters figure out to suit their individual desires and they adopt positions at the score and methods of handling their guns which at some time enabled them to break an exceptionally good score and they are continually endeavoring to regain their former successful method, never realizing that their good score had been made by drawing the targets they could break best and the few targets they were afraid of, their weak angle, because they did not know how to lead it, were broken more by chance than by good pointing.

Draw Big Influence on Scores

THE draw has a great deal to do with good scores. Few realize how largely it does figure with the 85 to 90% shooter. In a great majority of cases it is due to the uncertainty in their minds upon the lead of a certain target. There is no question about a lead being necessary. The quick, snappy execution shooter may not lead as much as the more deliberate shooter and the method of swinging and follow-up of the gun has a tendency to cut down a little upon the lead. For my

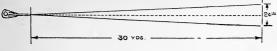


Figure 1

part. I always have worked on the theory that the effective spread of shot at 36 yards was about 24 inches. This means twelve inches upon each side of the place you pointed the sight. Therefore, if I pointed ten inches ahead of the target and, as some said no lead was necessary, I would still have two inches of pellets to break the target with and it would have to go 22 inches while the shot was getting there for me to shoot behind it. (See Fig. 2). I have always led my targets. When going back of 16 yards, the lead must necessarily be increased.

Lead Same on Both Angles

IF your gun is built properly the lead should be the same on both angles, right or left. Many right hand shooters miss their left quartering bird because they stop their gun slightly when they pull the trigger and vice-versa on the right quarter.

I would like to wager that old veterans like Gilbert. Elliott, Huff, Spencer, Heikes, Taylor and Apgar shoot

ahead of more of those they miss than behind them.

The chart on page 28 shows the theoretical lead needed on various targets based on an average velocity of shot charge over 40 yards of 900 feet per second and an average velocity of clay birds of 60 feet per second. The assumed point of control is 24 yards from the trap.

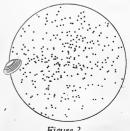


Figure 2

THIS TABLE WILL BE HELPFUL IN DETERMINING YOUR LEAD

	Left Quarter 45°		Straight-away		Right Quarter 45°	
Position	Range Yds.		Range Yds.		Range Yds.	Lead Ft.
1	33.294	2.95	39.166	1.30	39.352	1.43
$\left\{\begin{array}{c}2\\3\\4\\5\end{array}\right\}$	37.085	2.48	40.000	0.00	37.085	2.48
$\left\{\begin{array}{c}4\\5\end{array}\right\}$	39.352	1.43	39.166	1.30	33.294	2.95



A club shoot in progress at the traps of the Wilmington, Del.

Trapshooting, Association

Equipment

COMPLETE diagram showing correct installation of traps, will be found on page 44. Five shooting positions are shown, as, in all tournaments and most club shoots, a squad of five shooters faces the trap or traps at one time. The shooting positions are numbered from 1 to 5, number one position being at the extreme left, facing the traps. The distance between the five firing point positions and the trap is 16 yards, with distance handicaps extending back to 23 yards. A distance of from three to five yards—depending on scope of the grounds—separates the several positions.

Traps

THE size of your club in point of membership should dictate the number of traps that are necessary to properly care for every shooter. It is possible, of course, to start with one simple ground trap of the "Expert" type. Many small clubs have done so, adding other traps as their membership increased.

Three "Expert" traps, set Sergeant System are

sufficient equipment for an average, active club.

Automatic Traps

WHEN the amount of shooting warrants it the "automatic" type of trap is, without doubt, the most satisfactory to install. The Leggett, or latest Ideal Elliott Machine Trap, manufactured by the

Chamberlain Cartridge & Target Company, Cleveland, Ohio; and the Spangler Automatic Trap, manufactured by the Spangler Automatic Angle Trap Company, Tarlton, Ohio, and the McCrea Automatic Trap, manufactured by the Western Cartridge & Target Co., East Alton, Ill., are very successful.

Hand Traps

HAND traps, although not a necessary part of the equipment of a trapshooting club, are becoming more and more popular for informal trapshooting. They give many opportunities for good sport and valuable practice which would otherwise be impossible.

A hand trap, supply of shells and clay targets, can be carried in a suitcase. Carried along in automobile, boat or street car to any convenient place, this compact outfit, your gun and a companion, is all you need to conduct your own trap shoot. Such trapshooting, enjoyed on picnics, motor trips, or boating parties, at summer and winter resorts, in camp, or in any convenient field on the edge of town, is a very satisfactory substitute for the club shoots to those for whom the latter do not come often enough. A Hawkins right or left hand trap may be made in a few moments out of a small board.

The standard targets used in trapshooting are concaved discs made of a combination of tar and silt, or substitutes, and having a diameter of approximately $4\frac{1}{4}$ inches. The standard targets are specially designed to meet the three most important requirements of the traps; to be consistent enough to avoid breaking too easily in shipping and in the traps, and at the same time to be good "breakers" when hit by the shot charge from the gun. They are also carefully designed for perfect balance and proper distribution of weight,



At a leading industrial gun club's tournament

ensuring steady flight under all sorts of wind conditions. They conform to the standard dimensions, may be used in any trap, and will break, as a rule, when hit by but two or three shot pellets.

Targets for use at the traps, are made by the follow-

ing concerns:

Target Name Maker Location

White Flyer Western Cartridge Company E. Alton, Ill. Blue Rock Chamberlain Cartridge

and Target Co. Cleveland, O.

Black Diamond Black Products Co. Chicago, Ill. Canadian Blackbird Nelson Long Hamilton, Canada

Shooting Grounds

BEAR in mind the success of your club must depend upon membership—and membership will largely depend on the convenience of getting to the shooting grounds.

As has been said before, make your club a convenient one. It will go far to establish a healthy membership and to maintain it

Location

THE question of location, nevertheless, must be governed by the requirements of safety.

Do not install your traps within 300 or 400 yards. at least, of any occupied building. Avoid the proximity of schools and churches

Other Factors

THER factors which should influence your choice of shooting grounds are, first, the gun's position and arc of swing; second, the background as it affects the shooter's view of the targets.

A level stretch of ground with only the sky for a background is, of course, ideal for your layout. A compromise in some direction, however, must nearly

always be made.

Face Northerly

YOU should have the sun at your back, or nearly so, if you expect to have all-day shoots. Try to arrange that the shooters shall face in a northerly directionwith an unobstructed background.

Club House

A CLUB house may be built for \$100, \$1,000, \$10,000 —what you like! Trapshooting, as has been said before, embraces in its ranks men from every walk of life and of every degree of wealth. Nothing more clearly shows this than the variety of club houses to be seen in an extended trip through the country.

You may be sure that rainy days are certain to catch you at your shooting, and a shelter, let it be ever so

small, is greatly to be desired.

It is an undoubted fact, moreover, that a house adds stability to Your organization, and tends to make it permanent.



Frank Troeh.
A trapshooter extraordinary

Plans for two inexpensive club houses will be found on page 42. These are published just by way of suggestion. The Winchester Shooting Promotion Division will gladly cooperate with parties wishing to obtain club house plans.

Shooting Clothes

INDIVIDUAL taste will influence the trapshooter's choice of clothing. There are no rules for his of her observance. It is merely necessary that the coat or jacket be full and comfortable across the shoulder and under the arms. Suede leather jackets are popular, because they are light, soft and windproof. A shirt with a soft collar is a rational adjunct. Naturally, the hat or cap should defy the wind and shade the eyes.

There are on the market several excellent types of coats and jackets that are specially designed to meet the trapshooter's needs. They are preferable to the

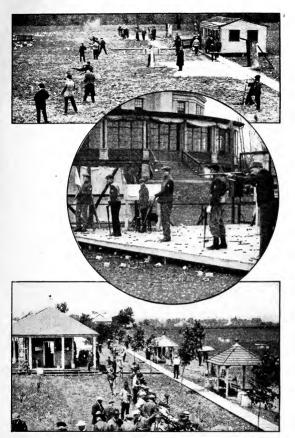
ordinary coat, and will repay investigation.

Shell Bag or Holder

A USEFUL item of the trapshooter's personal equipment is a shell bag in which to carry his shells while at the score, in case he does not have shell pockets in his coat or jacket. Bags of canvas, leather, or other suitable material, also holders for shell boxes, may be obtained and are worn suspended from a belt about the hips. A shell stand placed in front of each shooting position relieves the shooter and tends to improve scores, but you cannot depend upon finding these at all shooting grounds.

Shooting Glasses

GLASSES are quite commonly worn to protect the eyes from glares and unusually bright lights, also the gas and residue of powder and wads, blown back



(1) Philadelphia Trapshooters' Ass'n (2) N. Y. Athletic Club (3) Lancaster County (Pa.) Gun Club

on a windy day. For the latter a large plain glass is all that is necessary; for the former, a large amber glass gives satisfaction. There are glasses of a light yellowish shade, known as brightening glasses, which are a great help on a dark day or when the background is unusually dark. Of course, when there are defects in the evesight it is necessary to have prescription glasses made

Powders

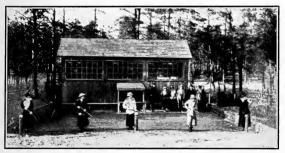
SHOTGUN powders are divided into two classes. according to their composition; smokeless and black. Smokeless powders are further divided, being classified as bulk and dense. Black powder is not allowed nowadays in trap loads, because the smoke is objectionable to the shooter and others at the firing line. Furthermore, black powder does not equal the efficiency of

present day smokeless powders.

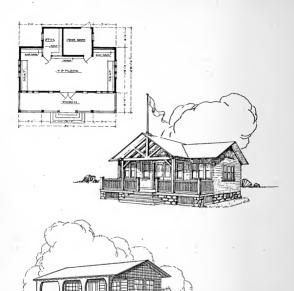
Bulk smokeless powders are so called because they may be loaded bulk for bulk with black powders. Dense smokeless powders are so named because an equivalent load of powder to give the same ballistics as the bulk smokeless is of smaller volume than the bulk. By a process known as colloiding, these powders are formed into a more compact, denser mass, which accounts for the fact that equivalent ballistics are contained in smaller volume. Dense powders are not affected by moisture or conditions of storage.

Winchester Leader and Repeater shells, loaded with 24 grains of dense smokeless powder, give a velocity of 865 foot-seconds for the 11/4 ounce No. 71/2 chilled shot load, and 880 foot-seconds for the 11/8. When loaded with 3 drams of bulk smokeless they give 900-footseconds velocity for the 11/4 ounce load and 920 for the 11/8. Winchester Nublack and New Rival (black powder) shells with 3 drams of powder and $1\frac{1}{8}$ ounces of shot give 865 foot-seconds. These velocities are measured over a range of 40 yards. The standard trap load is Repeater or Leader $3-1\frac{1}{4}-7\frac{1}{2}$ chilled, but $2\frac{3}{4}$ drams $1\frac{1}{8}$ is best for beginners as there is less recoil.

All standard bulk and dense smokeless powders are loaded in Winchester Leader and Repeater shells.



A squad of women shooting on the traps at Lakewood, N. J.



Designs for club houses, to cost from \$350 to \$1,250, according to location and amount of finishing. Courtesy E. I. du Pont de Nemours Powder Co.



Club Shoots

PVERY effort should be made to conduct your club shoots in an efficient and up-to-date manner. By this is meant that your program must be run off with dispatch and the minimum of confusion. Impress the necessity of this upon everybody. A club is largely rated by its ability to carry through its program

with a certain "snap and go."

It is necessary before every shoot to make careful preparation for its successful conduct. Your supply of targets and shells, for example, must be sufficient to carry through the program of events and practice. Also, sufficient shells should be available for shooters who fail to bring their own. Traps must be in thorough order, trappers on hand, referee, scorer, field captain, score and bulletin boards ready, and every detail properly arranged. Especially the cashier must know what is expected of him, understand cashiering and be provided with a supply of score sheets.

Visitors

PROVISION should be made for the comfort and pleasure of visitors and every courtesy extended them on their arrival.

The field captain and any assistants he has as squad hustlers should be sticklers for promptness, and get

military snap into their work.

Your prospective shooters should be on the spot when it is time to start the program. Nothing so disturbs a shoot for all concerned as waiting for thoughtless or delayed contestants.

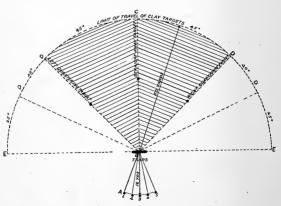
Procedure

BRIEFLY, a club shoot is conducted in the following manner:

Score sheets are filled in with the names of the contestants. These are divided into squads of 5 each. Each squad is numbered, as squads No. 1, 2, 3, 4, etc. Each individual should remember his squad number, also his position in the squad; that is, whether he is No. 1, 2, 3, 4 or 5, in whatever squad he is in.

Diagram of the Grounds

THE accompanying diagram shows the location of the firing line, location of the trap or traps and the boundary stakes, and the area within which the targets



are thrown. A represents the firing line and its five points, each 16 yards behind the trap, which is represented by B. The line B C indicates the distance targets should be thrown—50 yards. They must be thrown within the bounds indicated by the shaded area; if a target is thrown outside either of the boundary stakes B D at the left and right corners of the shaded 90 degree sector, it may be refused. Lines D E B are introduced to assist in locating other lines; they have no other purpose.

When all is in readiness, squad No. 1 is called and takes position, each shooter in accordance with his number on the score sheet—No. 1 being at the extreme left and No. 5 at the extreme right of the line. There is one exception to this rule. If a wind is blowing in a direction to blow the smoke and residue of powder and wads from No. 1's gun in the face of No. 2 the order should be reversed, No. 1 starting at the extreme right of the line and the order of shooting being from right to left

The shooters all being in position, the referee reassures himself the trap-puller is at his post and the scorer is likewise ready, then calls "Ready?" to the target feeder, or trapper, in the trap-house. Upon receiving reply of "Yes" or "All right", he tells the shooter at position No. 1 to shoot. Thereupon that shooter may call "Pull" as soon as he wishes his target thrown.

It is customary for the shooter to put his gun to his shoulder and sight it before calling for his target. This is optional under the rules, not obligatory, but the advantage it gives has made it universal practice in American trapshooting. One shot only is allowed at each target. Targets are thrown away from the shooter, at "unknown angles," left quartering, straight away, and right quartering.

Scoring

IF the target is broken by the shooter the referee calls "Dead"—and a figure 1 is set down to the credit of the shooter on the score sheet. Should the target be missed entirely, or show no perceptible piece detached after being fired at, the referee calls "Lost" and the scorer marks down a 0 (zero) against the shooter.

As soon as the referee has expressed his decision upon No. I's target it is No. 2's turn to shoot. And so on, until each man has fired the number of shots previously allotted to each position. If the event is at 10 targets for each shooter, 2 will be shot by each man at each of the five positions; 3 if a 15-target event; 4 if a 20-target event; 5 if a 25-target event.

le le	ac pe	lei	er		Ŋ	V					E					1		P	F	Par She	rfe Ite	ect ern s	ı		EVE SQU		TARGETS	
25	24	23	22	21	20	19	18	17	16	13	14	13	12	11	10	9	8	7	6	5	4	3	2	1	TOTAL	10	NAME	HAND)-
			Г	Г		Г	Γ	Г		Г	Г	П		Г		Г	Г				Г	Г				1		
	Г	Г	Г													Г	Г	Г	Г		Г	Г	П	Г		2		
	Г					Г	Г	Г		Г	Г	П			Г	Г	Г	Г	Г			Г	Г	Г		3		
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CHE	STEI	REI	PEATIN IN. CO	is Au	ens C		W	oı	10		Sta													ın	itio	n	FOR INFORMATION REGAR IRAPS MODING WRITE SMOOTING PROMOTION I	

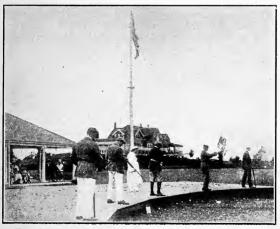
A Trapshooting Score Sheet

Changes of Positions

AFTER the first 2, 3, 4 or 5 shots have been fired, by every contestant in the squad, all move to the right one position, except No. 5 who moves around to No. 1 position. Supposing it is a 25-target event, 5 more targets are shot by each shooter from his new position, and again a change is made, these changes continuing until each shooter has fired at 5 targets at each of the 5 shooting positions. Thus the conditions have been made the same for all.

Rotation of Squads

SUCH other squads as there are, follow in the order of their naming on the record of the cashier's sheet,



Trapshooting at the Tedesco Country Club, Swampscott, Mass.

till each member of the different squads has fired at 25 targets and the event is finished.

It is important to keep a complete record of scores. They are convenient for use in handicapping, and besides, as time and practice tend to improve the shooting of the members, this improvement will standout most strongly in the record book and will be of interest to provide encouragement to beginners.

Two shooting days a month is the order in many clubs—again in others a weekly shoot is not thought to be too much. Every club has its own course to steer in this matter, and the committee will be wise to allow the first season's schedule to develop with the season.

Holiday Shoots

IT is generally the practice to include holiday shoots in the regular shooting schedule. Memorial Day, Fourth of July, Labor Day, Election Day, Thanksgiving, Christmas, New Year's Day and Washington's Birthday afford opportunity for utilizing the holiday spirit to lend a pleasant diversity to the season's program. It is on these days that the turkey shoots and gander shoots of early times are re-enacted, with pleasure and benefit to all.



At the traps of a winter resort hotel

The American Trapshooting Association

THE American Trapshooting Association, with headquarters at 460 Fourth Ave., New York City, is the official governing body of trapshooting in this country.

The official recognition of this Association is necessary to every Gun Club which desires prominence in the

trapshooting world.

Any club that is in good standing can readily secure this recognition by first joining its State Association.

Once your club has the endorsement of the American Trapshooting Association your tournament or tournaments receive the Association's unqualified support. Material aid is extended to the club. If your shoot is registered, your scores are duly recorded for the widest publication, and the position of your club made stronger in many substantial ways.

Official Trapshooting Rules

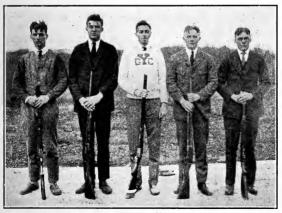
 Λ^{NY} one can obtain a copy of the official Trapshooting Rules of the American Trapshooting Association, free of charge, by writing for it.

Zone System

THE United States and Canada are divided into five zones, and each zone has its own organization, composed of affiliated state (and provincial, where Canadian provinces are included) trapshooting associations. At the annual meeting of each of these zone

organizations, one amateur delegate is elected to represent the organization at the annual meeting of the National Association. At this latter meeting, the General Committee which meets to formulate and adopt regulations for the government of the sport is composed of the President and five amateur delegates, five directors of the Association appointed annually by the President.

Individual members in good standing of the affiliated state and provincial associations are eligible to compete in all registered tournaments of the Association, upon payment of 50 cents registration fee for each day's competition at registered targets. Annual dues for individual membership are \$1.00, half of which goes to the A. T. A. and half to the state or provincial association.



Yale Gun Club, Intercollegiate Champions, 1921



An intercollegiate match, at Princeton

Tournaments

This cost should, however, be regulated to the club's finances. It is not necessary that tournament prizes be either elaborate or expensive. Some of these you will have to purchase, others will, doubtless, be donated by your members and citizens of your town.

Once you have decided that a tournament is desirable, arrange to secure these various prizes, and set a date sufficiently far ahead to allow for all arrangements.

Write Up Your Shoot

be sent to the different sporting weeklies and every effort be made to gain prominence for your tournament. Merchants will usually advertise in the program and in many instances attractive prizes may be secured in exchange for advertising space.

A 150-target tournament will be big enough for the average club to stage, and if it is properly advertised your entry list will be large. Prize shoots are always

popular and draw a good attendance.

A tournament is conducted on the same lines as any other shoot, though entry lists are generally much larger than those of an average club shoot. This means that there are more squads competing, more ties to be decided, and of course, more time is consumed in carrying out the program.

Suggested Program for a Day's Shoot

THERE are a number of different methods for arranging programs for tournaments. Usually, one of the various systems for the distribution of prizes and division of purses is selected which seems most appropriate, according to the available prizes and what is considered to be the most popular. Some of the systems in most general use are: the Squier Money-Back, Lewis Class, Hawkins' Class, Siefken, Jack Rabbit, Eastman, Equitable, High Gun, Rose and Percentage.

The management may use any system or systems, but they must be selected and announced before the tournament. The entrance fee for each event must be decided upon and announced in advance. Then when the club's charge of 2 or 3 cents each is deducted for targets and help, what is left, together with such money as the club may have added, will be divided among the contestants by whatever system the management of the tournament has designated.

For a 150-target program, \$1.00 or more if desired is charged each amateur to enter each of ten 15-target events. Of this, 20 cents is deducted and laid aside to make up an average purse for the whole program. and 20 cents for targets. This leaves 60 cents from each contestant which goes to the purse for each event. To the event purse any amount may be added. For instance, if the club or others make up a purse of \$50.00 this may be divided into ten parts, and \$5.00 added to each event. The day's average purse may be divided in any manner desired among those shooting the whole program. Unless otherwise stated in the program, it should be divided into one money for each \$10.00 in the purse, and given to the high scores on the 150 targets. Or it may be divided upon the Hawkins Class System or Lewis Class System and any prizes can be allotted the same way. Under this system, all other target money goes to the club.

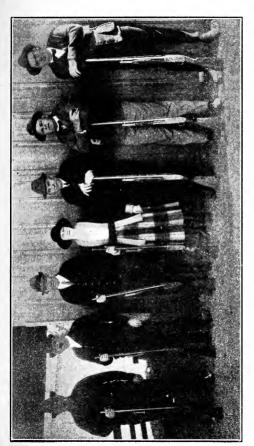
Herewith is a summary of several different systems:

Hawkins Class System

SCORES of contestants qualifying count **one place**. The number of places thus established is divided by three or four according to number shooting. When there are three, each third constitutes a class. Ties constitute one place.

Class 1, highest scores 1st quarter
Class 2; 2nd quarter
Class 3, 3rd quarter
Class 4, lowest scores 4th quarter

In case the number of places does not divide equally, Class I gets the one odd place, Class 2 gets the second. Money to be divided high guns, 50, 30 and 20 in each class. Any number of classes may be decided upon according to the number of shooters.



A family of fine trapshooters—the Eichens. Left to right—Dave, William, Alfred, Mrs. Fred, Charles, Frank, Fred

Lewis Class System (Jimmy Lewis of Pittsburgh, Pa., formerly representative of W.R.A. Co.)

TWO, three, four or five classes may be established, and are generally called A, B, C, D, E. This is not done until the day's program or the event is finished; with the understanding in advance, of course, that the purse is to be divided according to this system.

The scores are arranged in numerical order, beginning with the highest and running down the column, and then divided equally into the number of classes agreed upon, Class A being the highest.

The following rules govern the making of this division.

Where a short class is necessary, due to odd entry list, the short

class or classes shall head the list.

Where the line of division falls in a number of tie scores, the contestants are assigned to the class in which the majority of scores appear.

Where an equal number of tie scores appears on either side of the line, contestants shall be assigned to the head of the lower

class.

When the original division is changed, due to the scores, this change shall apply only to the classes directly affected and the original equation shall continue in the other classes.

Next, the purse or prizes are then equally divided by the

number of classes.

The purse division in the classes is made according to either the Percentage or Rose system, and by Class or High Gun system, merchandise or trophies always being awarded according to the latter.

The Siefken High Gun System, devised by F. H. Siefken, and sent to J. Mowell Hawkins with the following letter, is given on

the next page.

Mr. J. Mowell Hawkins Mgr. Shooting Promotion Division Winchester Repeating Arms Co. New Haven, Conn.

FRIEND MOWELL:

Your letter of the 3rd just to hand. I am enclosing a type-

written copy of the new system.

As this is a system of money division I did not tie it up with any classification, but I want to tell you that it works beautifully when used with your classification system, as we pulled several shoots last year this way, and the fact that low average shooters got a "whack" at good coin, made many friends for the game, and I am convinced that the Siefken High Gun System used in connection with the Hawkins Classification is the most equitable for all classes of shooters of any yet devised.

Yours for the good of the game, (Signed) F. H. SIEFKEN

Siefken High Gun System

HIS system can be applied to a program of any number of targets, with any amount of an entrance fee, creating any number of moneys desired working out best on 75 or more targets.

It is divided High Guns and applies only to those shooting through the entire program, or the specified number of targets, as

follows:

2 Entries up to and including 5, one money less than the number shooting through.

6 Entries up to and including 10, two moneys less than the number shooting through.

11 Entries up to and including 21, three moneys less than the number shooting through.

22 Entries up to and including 32, Four moneys less than the number shooting through.

33 Entries up to and including 50, Five moneys less than the number shooting through.

51 Entries up to and including 75, Seven moneys less than the number shooting through.

76 Entries up to and including 100, Ten moneys less than the number shooting through.

101 Entries up to and including 200, One Money for every 2 201 Entries up to and including 300, One Money for every 3

301 Entries up to and including 400, One Money for every 4

401 Entries up to and including 500, One Money for every 5 501 Entries and over One for every 10

Added Money is added to the total amount of Purse Fees.

A contestant may withdraw at any time and be refunded the amount of his unfinished targets, provided he gives notice to cashier before the start of the next string. The amount he has shot at, less the price of targets, is a surplus and is added to the total purse fee.

PROCEEDURE—Ascertain the total amount of the Entrance Fees, from this deduct the price of targets, which leaves total amount of purse to be divided, to this add the Surplus, or Added Money, if any. Refer to scale below selecting the figures desired —the figures at the left are the number of moneys, those connecting the divisor—This divisor, divide into total purse fee, multiply result by number of moneys wanted, which creates the first money, from this subtract the result of the division creating the second money, from this subtract the same amount creating

third money, and so on until exhausted. The last money should be same as the result of the division which proves the figures. (Do not use fractions, if any, with the result of the division.)

Number—Divi- Moneys—sor.	Number—Divi- Moneys —sor.	Number—Divi- Moneys—sor,
32 — 528 33 — 561 34 — 595	65 — 2145 66 — 2211	96 — 4076 97 — 4753 98 — 4851 99 — 4950 100 — 5005

Note—1 Money for every 2 entries—1 for 3, 1 for 4 and so on, may be used as regular program division, or an Optional Sweep, also Added Money in extra purses by dividing the amount into number of Moneys wanted and applying in extra Moneys. When any of these are to be used, program must so state.



The trap that throws the targets when the shooter calls "Pull"

The Siefken High Gun System used in connection with the Hawkins Classification seems the most equitable for all classes of shooters of any vet devised.

Squier Money-Back System (Luther Squier, Dupont Powder Co., Wilmington, Del.)

THIS system creates a special fund for the purpose of paying back in whole or in part, less the price of targets, the entrance fees of contestants who compete in all program events, and fail to win what they have spent above the charge for targets. This fund is made up from the added money contributed to the tournament from estimated profit upon targets trapped, and an extra entrance fee, usually \$1.00, charged each amateur contestant who competes in all the program events.

There is no guarantee given to fully reimburse those entitled to receive a return; but where the added money of a tournament has been placed in the special fund for distribution under this system, there usually is sufficient to pay back the full amount of

all entrance fees, less the charge for targets.

In case of a surplus, this is divided among the amateur high guns on a percentage basis, which provides for from two to thirty moneys, according to the amount.

Hawkins Classification by Average

TO be used for classifying shooters for a day's tournament, an afternoon shoot or for clubs to classify their shooters for month or season.

Classes are made up before shooting. Each contestant has his

known or estimated average applied against him.

Two or more equal averages are classified as one place.

If there are from 10 to 25 places (not entries or averages), they are divided into three classes; 25 to 50 places, four classes; 50 to 100 places, five classes; one class for each 50 places thereafter.

For example, where there are 25 entries with two cases of equal averages, there will be 23 places, three classes. Eight places comprise class one, eight places class 2, seven places class 3. The first odd place goes to class one, the second odd place to class 2.

CLAS	s I	CLASS	2	CLAS	s 3
Smith	.9575	Tallman		Thorpe	
Brown	.9436	Winder	.8862	Powell	
Jones	.9314	Tinker	.8832	Macy	.8170
Hill	.9314	Wylie	.8762	Jenks	.8050
Kelly	.9287	Emmett	.8757	Crane	.7245
Howe	.9208	*Irving	.8550*	Nixon	.6970
Doble	.9167	*Duke	.8550*	Dye	.6886
McKee	.8980	Arthurs	.8486	•	
Owen	.8933	Allen	.8350		

^{*} Duplicate averages, counting one place.

This system is especially equitable as it puts nearly the same number of contestants in each class and permits contestants of equal ability to contest against each other and is the best for classifying your club members for the whole season.

Jack Rabbit System

THIS system also places a fixed value on every target trapped, but this does not include the price of the targets. It very simply reimburses each contestant the full amount of his entry per target, for every target he breaks, and divides what is left between those who shoot into first, second and third place, on a basis of 50, 30 and 20 per cent. Thus, in a 25-target event, the management, if charging 2 cents each for targets, and fixed valuation being 10 cents a target, takes entries at \$3 each. It pays back \$2.50 to the shooter who runs straight and in addition gives him his share, on the basis of 50 per cent. for first place, 30 for second and 20 for third place, of the sum accumulated by retaining 10 cents for every target lost.

Eastman Class System

EACH contestant on making entry is required to truthfully declare to cashier the score he made the last day he shot at a registered tournament during the same season; otherwise his previous year's average on registered targets must be given. If he scored above 93%, he is entered to shoot in Class A; over 85 and including 93%, Class B; all under and including 85% Class C.

After deducting the amount charged for targets, the balance becomes a part of the purse in each class, the total amount of which is divided on scores made for the entire program, division being according to the High Gun system, one money for every

two entries.

Contestants shoot for purses in their own class only, and in no way are the purses of the classes mingled. In case the club is giving added money, this should be divided equally between the three classes.

If it is giving trophies, they should be of equal value and given to the high man in each class. If there are more than fifty amateur contestants, the system automatically changes to four classes.

division being as follows:

In case of a two or three day tournament, the classification changes each day, based on scores made the preceding day.

The Equitable System

DIVISION is here made on the basis of the number of targets broken by those who share in the division of the money. If for example, it is decided there are to be four moneys for a 25-target event at \$2.50 entrance, and there are forty contestants, the result will be somewhat as follows: Deducting a club charge of 2 cents a target from the total entry of \$100 leaves a balance in the purse to be contested for at 1,000 tragets. Suppose that:

Two	men	score	25,	making	а	total	of	50
Two		"	24,	"	u	"		
Two	"	"	23.	"	ш	u	"	46
Eight	. "	ш	22,	ш	u	u	u	176
			Т	otal				320

Those in the money have broken 320 targets. Divide the \$80.00 by 320, and the value of each target broken is 25 cents. Thus the 25's have won \$6.25 each, the 24's \$6.00 each, the 23's \$5.75 each and the 22's \$5.50 each.

Handicapping

THERE are two popular systems of handicapping, of which the distance handicap is most widely used. As a rule, the maximum distance is 7 yards back of the standard 16-yard line, or 23 yards, for the best shots. The other shooters are placed at 17, 18, 19, 20, 21, or 14 or 15 yards, according to their estimated ability. 24 or 25 yards are used at times.

Added Target Handicaps

NO handicapping committee is required for this system—the shooter handicaps himself by his previous score. His last score in a similar event, or the average of his last two, three or four scores, is taken as the basis for starting with. After that, the score he made in the preceding event establishes his handicap for the next one. In a 25-target event, a score of 23 or more is considered evidence of no handicap being required; or in other words, if the shooter has last broken 23 or more targets out of 25, nothing will be added to his succeeding score. If his previous net score was 22, he gets 1 target; if 21, he receives 2, and so on up to 10 added targets in 25. A shooter who with his handicap of added targets exceeds the highest possible score, is scored only the full number of targets in the event.

Distance Handicap

THE basis for allotting distance handicaps is the shooter's average at 16 yards; but the handicapping committee has the power to make any necessary adjustments to provide for an equitable contest. This is necessary in order to do justice alike to slow shots and quick ones. The usual allotments, with exceptions as above, are as follows:

Shooters who average:

95% or over	ards
92 to 94%22	u
89 to 91%21	"
86 to 88%20	"
83 to 85%	"
80 to 82%18	"
77 to 79%17	"
76% or under	«

Class System

THE following classifications, or others closely similar to them, are used where it is desired to make up classes for trophy shoots and provide trophies for each class:

C-70 to 80%
D-69% and under
3 Classes
A-88% and up
B-75 to 88%
C-74% and under
2 Classes
A-85% and up
B—All under 85%

If all classes compete for one trophy, and added target handicap is also used, as follows:

Class	A	0 or 1	added t	arget	in	25
"	В	2 or 3		ű	ш	25
"	C	4.or 5	"	"	"	25
"	D	6 or 7	ű	"	cc	25
"	E	8 or 9	"	"	"	25

When class A contestants are given 0 added targets, all other

classes receive the smaller number, and vice versa.

Resident contestant at State tournaments sanctioned by the American Trapshooting Association are divided into four classes when there are 50 or more of them, into three classes when there are less than 50. Classification is on known ability, and made by a committee selected from those attending the tournament. The classes are as follows:

4 Classes	3 Classes
A-92% and over	A-90% and over
B-88 to 92%	B-85 to 90%
C-84 to 88%	C—Under 85%
D-Under 84%	

Rose System

A GIVEN number of points is assigned to each place, the usual division being 5, 3, 2 and one. To suit local conditions, the points may be made 4, 3, 2, 1; 7, 5, 3, 1; or five or six figures may be used. An equal ratio is assured, high scores are best rewarded, and large winnings are not made possible by a contestant getting a place alone. Under the usual division if there were fifteen contestants in a 25-bird event, who paid entry fees of \$2.50 each, leaving a purse of \$30.00 after 2 cents each had been deducted for targets, the result might be as follows:

One first, 5 points at \$2 each,	\$10
One second, 3 points at \$2 each	6
Three thirds, 6 points at \$2 each,	12, or \$4 each
One fourth, 1 point at \$2	2

Total . . . \$30

High Gun System

TWO places are created for every five or ten contestants, and the money, or net purse for each division, is divided 60 and 40 per cent., between the highest and next highest contestant in that division. The assignment of points is left to the management, who will make the most equitable division of the purse according to the number of entries. For example, Two moneys, 60 and 40; three, 50-30-20; four, 40-30-20-10 or 35-30-20-15; five, 30-25-20-15-10; six, 27-23-17, 13-11-9; and so on.

Percentage System

WHERE the entry permits of there being two moneys, the net purse is divided 50,30 and 20 per cent; four, 40,30,20 and 10; five, 30,25,20,15-10. This is sometimes varied by arranging for three, four or five equal moneys. Ties in the various places always divide the purse, therefore a single contestant in a place may win handsomely. This element of chance holds this oldest of all systems of money division in favor among the better shots, in spite of its having long been objected to as giving contestants opportunity to drop to a lower class if it was found to promise a better return.

Sliding Handicap

THIS system is an elaboration of the distance handicap. It rehandicaps all contestants after each event. All start at 16 yards. A contestant who breaks 20 straight in a 20-target event, must go back to 20 yards for the next event. He who scores 19 goes to the 19 yard mark, and so on, 16 yards being the limit allowed for low scores. It is used similarly for 10-, 15-, or 25-target events, a straight score imposing a 20-yard handicap.

Standard Trap House

IT is suggested to all clubs holding Registered Tournaments, by the American Trapshooting Association, if possible, to have the front eaves of the trap house not more than 2½ feet, and the rear eaves not more than 3 feet above the level of the shooting position; and that the point where the target first appears at the extreme left and right angles from any one of the five shooting positions vary not more than 6 feet along the front eaves of the trap house. (See page 67).

Trophies-Prizes-Medals

It is suggested, however, that one or more trophies be provided, to shoot for which only members of your club are eligible, and

which are shot for at stated intervals.

A "Season Cup," for example, can be an attractive trophy for which your members shoot once a month. On a prearranged date it would finally become the property of the shooter who had won the largest number of monthly events.

It would be fairest to arrange these shoots on a handicap basis. as from the very beginning, your shooters will have shown a de-

cided difference in skill.

Inexpensive prizes or medals should be provided for other occasions. They furnish a stimulus to shooting and an incentive to the making of better scores.

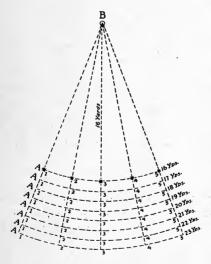


Diagram of firing points for distance handicaps

SUGGESTED FORM FOR CONSTITUTION AND BY-LAWS

Name and Object

THE name of this club shall be the and its purpose is to promote the sport of trapshooting, and to encourage good fellowship.

mote the sport of trapshooting, and to encourage good fellowshi and a love of the outdoors among its members,

and a love of the outdoors among its members

Membership

Officers

THE officers of this club shall be a President, Vice-President, Secretary, Treasurer and Field Captain, who shall be elected by ballot at the annual meeting, which shall be held on the first regular meeting day in each year.

Duties of Officers

IT shall be the duty of the President to call meetings of the club, to preside at all regular meetings, and to have general supervision of the affairs of the club.

The Vice-President shall, in the absence of the President as-

sume and exercise all the duties of the President.

The Secretary shall keep all scores and records of the club in books prepared for that purpose, and shall have charge of the clerical work incidental to all contests and tournaments, and be responsible for the correctness of all records.

The Treasurer shall collect all moneys due from members. He shall keep all funds belonging to the club and be responsible for the same, making only such disbursements as the proper officers

shall approve.

The Field Captain shall have charge of the shooting grounds and ground property, and the conduct of all club shooting shall be under his direction.

Meetings

MEETINGS of the club shall be held as the members may elect at the annual meeting, or upon the call of the President, or of any three members when such call is presented in writing.

Fees

THE annual membership fees of this club shall be payable yearly in advance. The initiation fee of shall be payable with each election to membership.

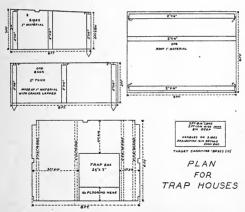
By-Laws

1. A quorum shall consist of members, without which number no business may be legally transacted at any meeting.

2. The price of clay targets for practice shall be cents each. For club shoots, special prize shoots and for tournaments, the proper officers may fix the price deemed necessary.

3. Members wishing to shoot on other than club meeting days shall pay for the hire of trappers and for such other expenses as they may incur. Members entertaining friends shall be responsible for their conduct and all charges incurred by them.

4. This constitution and by-laws may be amended by the vote of a majority of members in attendance at any meeting, provided at least two-thirds of the entire membership are present, and that written notice of the proposed change shall have been given to all members at least one week prior to the date of the meeting.



Suggested plan for standard trap house to contain a single automatic trap

TRAPSHOOTING SCORE SHEET

Event No	Ent	ran	ce .	_			_	_!	Yur	nbe	٢0	ſŢ	arg	et	5_	_	_	_	. D	ate	_	_			_	_ 19
NAMES No. TARGETS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	FOTALS
POSITION		7	1				#	2				*	3	Γ	Г		*	4	Γ		Г	#	5			
SCORE	0	1	,	,	1	1	0	1	,	,	,	,	1	,	1	1	,	0	t	,	1	,	1	0	,	2/
DIRECTION	1	1	ı	1	1	1	1	1	1	\	/	1	,	1	1	1	1	\	1	1	1	1	1	7	1	
HEIGHT	L	-	L	H	-	-	-	H	-	H	H	-	H	┝	╌	-	L	r	<u> </u> -	H	-	-	-	1	L	
DIRECTIONOFWIND	Γ		(3)	0	13	7/	N	CE	0	F	A	RO	E.	s	-5	0	ΥC	S.	R	SE	1	67	D3	
SHOOTERS TIME						4	Ų	ŧе	K		1	16	bı	Ur		-	şt	01	V	E						
REMARKS		L			L	L	L	L	L				L	L		L						L		L		

Improving Your Scores

By J. Mowell Hawkins

ID you ever try to analyze your shooting? What are your weak points? Where is the weak spot?

I have prepared an illustrative chart, shown here, which I made up while trying to diagnose the case of a 95% shooter who had been shooting much below form. I believe this will prove interesting and will be of great assistance to many who may be in doubt as to where their real trouble lies. The chart can be made up upon any ordinary score sheet and the information obtained in many cases will be highly enlightening. The chart is arranged right on the score sheet.

"Position" means the position or stand at which the shooter starts, for it is important that the position or stand the shot was fired from be stated. Therefore whichever position the shooter may start from, the recorder should start scoring in the boxes under the position number. The scorer, or recorder, should stand directly behind No. 3 stand.

Next on the chart is "score." Broken or missed, the

target should be scored. Beneath this the direction of the target should be recorded. A left quartering target should be scored from the right hand corner of block or box on score sheet to upper left hand corner, a straight-away from bottom toward the top and a right quartering from the left hand corner of block to right. The recorder, in other words, should indicate the direction of target upon chart as near as possible from his position behind stand No. 3.

Next on the score sheet should be written "Height." That means if a target is higher than usual, it should be so indicated by making a horizontal line higher up in the block upon score sheet. For a low bird, make a line lower down and for a medium bird line across the center

-(see diagram).

The direction of wind should next be indicated by an arrow pointing in the direction toward which the wind is blowing. The distance of the target should be as near 50 yards as possible.

Make Analysis of Chart

A LITTLE study of the illustration will show that the shooter who made the score in the accompanying illustration was weak on his medium left quarter target for this is the one he missed.

His 21st target was an extreme left and he broke it. He broke all of his right and straight-aways and only broke three slight left quarterers and it appears that these were broken because the height of each was just about medium. The four left quartering targets he missed were high ones and it is evident from the direction of the wind that the height was caused by the wind therefore it is reasonable to assume that there was an upward wind pressure upon the target with slight right drift to shot and his trouble was caused by undershooting.

Chart Proves Itself

THE assumption was proven in this case for the shooter, after looking at the chart, returned to score and broke 24 out of 25 including five slight left quarterers. He did this by shooting higher and missed one straight-away by over-shooting.

If your gun is too straight or too crooked, stock too long, or too short, comb too thick to too thin, if you are gripping too far out with the fore-arm, shooting too slow or too quick, a conscientious and correct record of six or eight strings of 25, charted in detail according to direction, will disclose the fact or, through a process of elimination of the strong points, will narrow the trouble down to one of the above causes or establish the fact.



Winchester Service To Trapshooters

THE Shooting Promotion Division of the Winchester Repeating Arms Company is conducted for the purpose of giving practical assistance to trapshooters, all users of shotguns and rifles and to gun clubs everywhere. Under the management of J. Mowell Hawkins, aided by a staff of expert shooters, this department is prepared to give advice on all matters pertaining to guns and ammunition, trapshooting and rifle range equipment, improving your shooting, and on organizing and conducting gun and rifle clubs. If you are planning the formation of a club, let it help you. If your club is in need of any assistance to make its shoots more interesting, to extend its growth or to progress in any way, that is the service Mr. Hawkins and his staff are prepared to render you. Write to the Shooting Promotion Division. Winchester Repeating Arms Company. New Haven, Conn.

Another Winchester aid to the sport of Trapshooting is "The Trapshooter's Bulletin" published occasionally under the auspices of this division. This Bulletin gives practical and timely information of value alike to individual shooters and clubs, important news of the sport and various items of general interest to gun clubs and users of the shotgun. Have your gun club secretary write to be placed on our free mailing list, so you may

see it at the club.

These experts form the Winchester staff, whose services are at your disposal.



J. Mowell Hawkins

J. Mowell Hawkins

MOWELL HAW-KINS, Manager of the Shooting Promotion Division of the Winchester Repeating Arms Company, is one of the pioneers of the sport of trapshooting. For more than a score of years he has every year been one of the leaders in the averages. He has always been one of the most popular trapshooters in the country, and has been the tutor of many of the men who are today conducting tournaments. His chief ambition and hobby is to aid in making trapshooting ever more popular and successful as a leading American sport.

Hawkins entered the shooting game at the age of 17 by winning the Champion ship of Maryland with a score of 48x50.

He held this title for eight consecutive years. He joined the ranks of the Winchester shooters in 1902. In 1908 he topped all shooters in the year's averages with the mark of .9663. He held the professional trapshooting championship of Pennsylvania for several years. He was high professional at 16 yards in the Grand American of 1911 with 100 straight; also broke 100 straight in the Eastern the same year. He has made many long runs, including 388, 376, 333, and 311 straight.

It was Hawkins who took out the famous team of Winchester shooters which toured 43 cities in 43 days in 1906. He also took on tour the equally famous Winchester team of 1919, which gave exhibitions in eight states, created a new world's record on double targets, and gave a fine impetus to the sport. In 1922 he won the Conn. single and double target, handicap

and all around championships.



Charles G. Spencer

He is a shooter who never picks his shoots nor his weather conditions. He has shot at nearly 200,000 targets in twenty years and averaged over 95 per cent.

Charles G. Spencer

CHARLES G. SPENCER, of St. Louis, Mo., another member of the famous Winchester team of 1919, made the highest trapshooting average in the world for the entire twelve years from 1909 through 1920. During that time he shot at 64,745 targets on which he compiled an average of .9660, and never once during those twelve years did his average for a single year fall below 96 per cent.

Spencer also is a strong continuous target shooter. Back in September 1909, he established a world's record of 565 straight, a record which stood for ten years. He was stopped by running out of shells. He also established a world's record when he broke every target he shot at in two 200 target registered programs in two consecutive days. Still another of his records is that of 97x 100 from the 22 yard mark, which he made at the Eastern Handicap at Wilmington, Del., in 1911.

He is a shooter who is not backward about the number of targets he goes after every year. In 1909 he averaged .9720 on 8,325



John R. Taylor

targets, in 1915 he took first place in the averages with .9750 on 5,620, in 1919 he attained .9677 on 7,000 and in 1920 .9659 on 11.330.

Spencer captured the first Interstate Southern Handicap by making the remarkable score of 98x100 from the 20 yard mark. In 1917 and 1920 he showed his supremacy as a double target shot by taking the Hazard trophy, emblematic of the World's Double Target championship. In his 1920 victory he made the professional world's record of 97x100. He is the present all round Professional Champion of Missouri. In 1920 he won the Professional Singles Championship of the United States.

Spencer joined the Winchester ranks in 1903. He began his shooting career in 1889 by winning a gold medal and a silver cup at a shoot at Jerseyville, Illinois. He had tied his father in one

event and on the shoot-off defeated him.

John R. Taylor

JOHN R. TAYLOR made probably as spectactular an entry into J the trapshooting world as there is any record of. In 1902, when Taylor's name was unknown, after considerable practice on the farm back home he plucked up determination enough to present himself at the first tournament he had ever attended, held in Kenton, Ohio. No one knew him, there were a number of high grade shooters present, and he was placed in a late squad. With a 94x100 to beat, Taylor went in and turned in a 98. He was high man for the two days shoot, his first tournament.



Fred G. Bills

Taylor joined the Winchester shooting staff in 1905, and in the following year he won the International Championship of the United States and Canada with a perfect score. In 1911 he was high average professional of the United States.

One of Taylor's pet tricks is the winning of the high professional average of Ohio. He is the present professional trapshooting

champion of Ohio.

Many times Taylor has captured high average at the larger tournaments, including those of the Westy Hogans, Pinehurst, Indiana State, Western and Southern Handicaps.

Taylor was a member of the famous Winchester trapshooting

teams of 1919 and 1920.

Fred G. Bills

FRED G. BILLS, of Chicago, as a member of the Winchester shooting staff, soon became one of the most popular and best known professional shots in the United States.

During the war Bills became an instructor in marksmanship to the boys in the American Air Service, turning his great ability with

the gun to its highest patriotic work.

On his return to trapshooting as a civilian, in 1919, he started out at once by capturing the Professional Championship of Illinois.



Fred Tomlin

In 1910, Bills won the double target average of the world. In 1911, he won the high general average at the Post Season tournament, held at Indianapolis, Indiana. He was two targets behind the national winner of the season's average. In 1912, he again won high average at the Post Season tournament, held at St. Louis, Mo. He won high general average and the handsome sterling silver cup at the Eastern Handicap at Wilmington, 1913. He won the Professional Championship of Illinois at Springfield in 1914. He also took the high general average at the Pre-Olympic Tournament in 1914.

Fred Tomlin

ONE of the best known of the younger trapshots of New Jersey is Fred Tomlin of Glassboro, now a member of the Winchester shooting staff. As a boy, Tomlin took up rifle shooting, but he did not break into the shotgun game unil he had reached 18. It was not until 1914 that he took up the shotgun in real earnest and turned in his first work on the 2,000 registered targets required to rank him among the official average men. Since then he has been a regular at the traps. In 1918 he averaged .9566 on 4,475 targets, in 1919 .9550 on 4,650, in 1920 .9588 on 7,720 targets and in 1921 .9669 on 6,815 targets.

Tomlin captured the state amateur championship for New Jersey in 1915 and again in 1918. It was in the latter year that he



Mrs. "Ad" Topperwein

tied Bill Heer for the National Championship at the Grand American, with a mark of 98. He is the 1922 All Around Professional

Champion of New Jersey.

In his whole trapshooting record there is nothing to which Fred points with greater pride than his exhibition at the United War Work Benefit shoot at Travers Island in November of 1918. After scoring a mark of 98 in the elimination contests, he went out and hung up a 99, which returned him the winner of the big event of the shoot, against such nation-wide stars at the traps as Mark Arie, Frank Troeh, Bill Heer, Chas. Powers, and others.

At the 1919 meet at Lakewood, in addition to his long run record Tomlin shot through the entire meet, including 100 targets on the practice day events, with a record of losing only five out of 500 targets. This was in the shooting from the 16 yard mark. In

1920 he did still better, dropping only 4 out of 500.

In 1921 Tomlin outclassed the professional field of trapshooters winning the 18 yards National championship. Tomlin broke 194 straight in this event, losing his 195th target after an unfortunate incident with the trap puller.

Mrs. "Ad" Topperwein

IN the shooting world the name of Mrs. "Ad" Topperwein is one to conjure with. Like her noted husband, she is proficient with rifle, shotgun and revolver. Her fancy shooting and her regular work with gun and rifle have been the wonder of hundreds



Adolph Topperwein

of thousands of people, who have seen her shoot at hundreds of

exhibitions all over Ámerica.
Yet Mrs. Topperwein says she did not know the difference between a shotgun and a rifle before her marriage. She became interested in the sport watching her husband's fascinating shoot-

ing, and under his coaching developed into a star of the first magnitude.

Her first shooting in public was done at St. Louis during the World's Fair, when her husband was giving his Winchester exhibitions. She scored 967x1,000 hits on 2½ inch targets thrown into the air. She did her shooting with a Winchester .22 caliber automatic rifle. She also made a run of more than 200 at clay targets. In 1908 she scored 1,995x2,000 on 2½ inch targets, making a straight run of 1.437.

At trapshooting Mrs. Topperwein holds all the straight run records for women at 16, 17, 18, 19, 20, 21, 22 and 23 yards, which might be considered some record in itself. Her score of 1,952 out of 2,000 shots in five hours and twenty minutes is a world's record for anyone, man or woman. The actual shooting

time was about three hours.

Mrs. Topperwein was a member of the Winchester teams of 1906, 1919 and 1920 and helped to raise the squad trapshooting record to the mark of 490x500, made at Albany, Georgia, and the squad record of the world for doubles 97x100, at Rockford, Illinois. She has made nearly 100 century runs, scoring 123, in a



Boyd F. Duncan

shoot in which she broke 485x500 regulation targets in two hours and twenty minutes elapsed time.

Her high run record is 280.

Adolph Topperwein

IN the shooting profession "Ad" Topperwein is known as the "Wizard of the Rifle." On no less than thirteen occasions he has broken world's records for shooting flying targets with a rifle.

On one occasion he broke 85 out of 100 2½ inch targets thrown an automobile going 30 miles an hour. He first tossed the targets and then shot at them. Another record is 4,954 breaks out of 5,000 134 inch targets, and an even more wonderful one is

the record of 9,999 out of 10,000 21/4 inch flying targets.

Possibly his most remarkable shooting with a rifle was at San Antonio, in July, 1907, when he shot eight hours a day for ten days and only missed nine in 72,500 2½ inch wooden blocks that were tossed 25 feet in the air by an assistant. Out of the first 50,000 blocks shot at he missed only four. Not only did Topperwein shoot at the blocks, but he loaded his Winchester 72,500 times.

In this remarkable test of shooting skill and endurance, Topperwein had straight runs of 14,540, 13,597, 13,292, and 10,383. It isn't likely this record will ever be beaten. It is a tremendous strain to undergo such a performance. From the standpoint of endurance and the number of targets shot at and broken this feat stands as the world's greatest shooting performance. He has also broken 3,507 clay targets in succession with a .22 caliber rifle.

Topperwein's first world's record was made October 7th, 1894, when with his Model 90 Winchester he broke 955x1,000 2½ inch

clay discs thrown in the air.

Boyd F. Duncan

ONE of the best trapshooters below the Mason and Dixon line is

Boyd F. Duncan, of Lucy, Tenn.

Duncan won the amateur trapshooting championship of Tennessee in 1918 when he was just turning his twentieth birthday. The next year he joined the famous Winchester shooting team and the Winchester Shooting Staff. He won the professional championship of Tennessee in 1919, 1920, 1921 and was ill when the 1922 shoot took place. In 1919 and since, Duncan has been the leading professional shot in Tennessee and in practically every shoot he participates in he is "High over all." Duncan, it may be said, is a southpaw shot, one of the few good ones in the United States. He was one of the four left-handed shooters who won state championships in 1918.

Duncan broke the first 50 birds straight in the first registered shoot he had ever attended. This was in 1916. He had two runs

over 200 in the early part of 1922.

Capt. W. H. Richard

THIS marksman began military rifle shooting at 16 as a member of the Ohio National Guard, and soon attained a reputation

as a crack shot.

Captain Richard served in the Spanish-American war as a rifle instructor in markmanship. After the war he served three years as captain of his company, and for twelve consecutive years he shot as a member of the Ohio State Rifle team. He has been a member of the Winchester shooting staff since 1906, except for 16 months of service in the world war as rifle instructor in the army.

Captain Richard twice won the long range championship of Ohio. He is the only shooter who has won the Leech Cup at the National Matches three times, his third success being scored at the Caldwell meet in 1919. In 1903 he won the Wimbledon Cup, in 1904 the Rapid Fire National Individual, 1906 second place in the President's Match, 1911 the Cantrow Cup, 1922 with Captain Eddy the two-man championship, the Swiss Match, 1913 the Meany Match; Spencer, 1,200 yard open match (record score)



Capt. W. H. Richard

and grand aggregate; 1914, Marine Corps and Nevada Trophies with record scores at 600, 900 and 1,200 yards, grand aggregate, Libby 1,100 yard match, and first place in tryout for Palma team; 1915, Libby Match with record score for service rifle; 1919, Grand aggregate Small-Bore, Nevada Trophy, and record in Small-Bore match.

Has served on Ohio and Connecticut state rifle teams, Ohio team to France, All American in 1913, and 1919 $U.\,S.\,$ Small-Bore

team.

Besides being a high class rifle shot Richard is a sterling performer at the traps and in 1921 he won the professional championship of Connecticut.

Virgil Richard

VIRGIL RICHARD, son of Capt. W. H. Richard of New Haven, Conn., created a sensation during the Summer of 1920 by making a perfect score in the Small-Bore Rifle Matches at Tenafly, N. J., this being the first perfect score of 100 ever



Virgil Richard

recorded in open shoulder to shoulder competition in the U.S.

with the small bore or .22 caliber rifle at 100 yards.

His victory was doubly impressive as he used the new Winchester Bolt Action Rifle and Winchester Precision cartridges, the same as he used in his wonderful shooting during the 1921 National matches at Camp Perry, Ohio, when he tied in the Wimbledon match and only lost out because he was out ranked by his competitor. He won the Swiss Match, then the Long Range Reentry and the Egg Pool Match. He tied with a perfect score in the 50 yard sweepstakes and did the same in the hundred yard sweepstakes. Then to top it all he made high score, 393x400 in the International Team Match (America vs. Great Britain), outshooting the best shots in the United States and England.

Virgil was a member of the famous Winchester Shooting Team of 1920 shooting exhibition scores throughout New England. He is an excellent shot with the .30 caliber rifle, and a very good trapshot. Together with his famous father he is one of the valued members of the noted Quinnipiac Rifle and Revolver Club of New

Haven, Conn.

HANDICAPPING

By J. Mowell Hawkins

WEBSTER defines handicaping as follows: "To impose disadvantages or impediments upon in order to offset advantages. A condition imposed to equalize the chance of competitors,

to encumber with difficulties, hinder or retard."

Sportsmen as a rule hesitate to handicap or take advantage of a contestant who has developed more skill, yet, while this is a very laudable feeling, to be proclaimed scratch man is really an honor to the expert as it is denotative of his superiority and a direct

compliment to his ability.

In trapshooting there are two basic principles of handicapping the contestants. One concerns the distance from the target, which is governed mainly by regulation of the rise or the actual distance from the trap throwing the target, though it may be controlled by increasing or decreasing the speed or distance the target is thrown. The other is a score allowance of added targets or points to the actual score made by a contestant or additional targets to be shot at.

The standard rise being 16 yards, the shooters are assigned, generally in accord with the views of the committee, to positions at the different yard marks back to 22 or 23 yards which is the usual scratch limit. These "views" usually cause a great deal of comment and there is no doubt but that many contestants suffer injustice because a uniform or standard method of alloting handicaps has never been adopted. The members of the usual handicap committee invariably assume that two contestants shooting 90 per cent at 16 yards should be placed upon the same handicap mark. This is not the proper idea at all for two men may shoot 96 per cent yet, if they are placed at 22 yards, one may aver-

age 90 per cent and the other 80 per cent.

It surely seems that a shooter's known handicap average should have as much bearing upon his handicap assignment as his 16 yard average, but there are a number of good shots who have attended handicaps for years and years and they are placed at 20 and 21 yards and have never been known to break 90 per cent. Therefore, when one of these contestants is placed at this long distance, in recognition of his 16 yard shooting, he is beaten before he starts. This is manifestly unfair for he should have an opportunity to break at least 95 per cent occasionally for less than 95 per cent would never win a handicap in a large field where normal conditions prevail.

A proper method for handicapping, and one that the writer

believes should be adopted by the A. T. A. is as follows:

The committee should agree upon the scratch limit, say 24 yards or even 25 yards. Then the field should be looked over and the

best handicap shot should be placed at the scratch mark. After a careful consideration of the background and general shooting conditions the committee should estimate as nearly as possible just how many targets this scratch man should break in the event. Let's say they decide that, upon all available data, he could break 94 per cent, or 94 in a 100 target event, unless he exceeded all his previous records. The remaining contestants should then be placed where they could break 94 if they exceeded their previous records under the conditions. If the conditions are not hard enough make them right.

I know men who for 25 years have never broken 90 out of 100 when placed one yard back of 16, yet because they can break around 88 per cent ordinarily at 16 yards, are placed 18 and 19 yards regularly in all the big handicaps. It's a joke. These men should be given a chance in the handicaps. Why should they be placed at 18 or 19 yards when it is almost a certainty that they will not break 90, while many others are placed at 21 and 22 yards

who will break over 90 on an average.

It is the wrong idea and the sooner it is discontinued the better it will be for the game. Place them all where they have an equal chance upon statistics and expert estimation of their general

shooting to break the winning score.

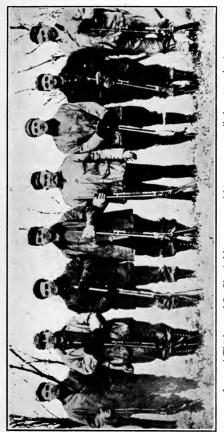
The same holds good for the added target handicap. Take the contestants' averages, then estimate just how many the best shot will break, then add the number of targets found to be the difference in the averages to the score the best shot should break. For instance one shooter's average is 95 per cent, another's 80, and the best shot should break 97. Give the 95 per cent man two targets and the 80 per cent man seventeen. It will be said, "Too many will make a perfect score under this plan." Well if one has a chance for a perfect score why not all?

The idea usually appears to be to distribute the shooters promiscuously at the different marks. Upon one of the committee's ideas, Jones is placed at 19 because he broke 94 one day in a 16 yard event and at the next handicap one of the committee says, Jones shot from 19 yards last time. From then on Jones and 19 yards are synonymous regardless of the fact that his score never

gets above 85.

A shooter's nerve, strength, time, handicap record, action under strain, and general ability, should be considered well in addition

to his 16 yard average.



Leonard Thielman of St. Cloud, Minnesota, and his seven sons, all shotgun enthusiasts

The Suggested Loads For Most All Purposes

Leader, Repeater, Nublack and New Rival 12 ga. shells

	Drams Powder	Ounces Shot	Size Shot
Trap Loads	3	1½ or 1¼	7½
Shore Birds, Reed	23/4	1	8 or 10
Rail Sora, Rice Snipe, Woodcock	3	1 or 1½	8 or 10
Quail, Jack Snipe }	3	1 or 1½	7½ or 8
Pheasants	3	11/8	6 or 7½
Grouse, Partridge,) Prairie Chicken Hawks, Crows	3 or 31/4	11/8	6 or 7
Small and Medium	3	11/8	6 or 7½
Ducks	31/4	$1\frac{1}{8}$ or $1\frac{1}{4}$	6 or $7\frac{1}{2}$
Mallards, Canvas }	3½ or 3½	1½ or 1¼	4, 5 or 6
Pigeons	31/4 or 31/2	11/4	7 or 7½
Squirrel, Rabbits	3 or 31/4	11/8 6,	7 or 7½
Wild Turkey	31/4 or 31/2	11/8	2 or 4
Geese	3½ or 3½	11/8 B	B, 2 or 4

Where Dense Powder is desired specify 24 grains for 3 drams, 22 grs. for 2 drams, 26 grs. for 3 drams, 28 grs. for 3 drams, 28 grs. for 3 drams. For 14-16-20-24-28-36 ga. or 410, use the same size shot but less powder and amount of shot.

Single Ball in all gauges for Deer, Bear, etc.

Winchester Leader and Repeater brush loads make choke guns shoot just like cylinder for field shooting.

To All Trapshooters

INCHESTER shotguns have been used by a generation of shooters under every conceivable condition of service. They have always been found accurate, and absolutely dependable.

Winchester Shot Shells hold most of the world's records for trapshooting. They are the choice of cham-

pions and of seasoned sportsmen everywhere.

In boring Winchester gun barrels the most accurate precision instruments and exhaustive practical tests are used. From chamber to muzzle every barrel is bored to a standard specification with less than a thousandth of an inch of variation.

Stamped on every barrel the mark the gun has passed the Winchester Provisional and Definitive Proof Tests, having been fired many times in tests of action and dependability, and strengthested by firing with 25 to 40 per cent. excess loads. These tests are more severe than the British Government Proof Test.

In addition, every Winchester Shotgun of Tournament or Trap grade is specially tested for pattern. Thus the trapshooter who wants a gun that is particularly well adapted for the sport is assured of obtaining in a Winchester of either of these grades a gun that, if used with Winchester Shells containing trap loads, will meet every requirement of a special trap gun.

Because of these methods of gun making, developed for fifty years with the advance of science, the name Winchester to-day stands for accuracy, dependability

and durability, wherever firearms are used.

Winchester Model 97 Repeating Shotgun

CARRIED to every corner of the globe, subjected for more than twenty-five years to every sort of endurance test of rough and continuous usage, the Winchester Model 97 Repeating Shotgun is still the choice of seasoned sportsmen. It is today in more general use than any other repeater.

The Model 97 is made in 12 gauge only, and in takedown form. The same strong take-down system is employed as in the Model 12, shells are loaded and ejected in the same manner, and the magazine also holds 5 shells.

The Model 97 plain finished 12-gauge repeater is made with 30 inch rolled steel barrel, half pistol grip stock and action slide handle of plain walnut. Full, modified choke or cylinder bored, 26, 28 or 32 inches in length. Hard rubber butt plate is standard, but steel butt plate will be furnished without extra charge. Drop of stock at comb 134 inches; drop at heel 236 inches; length 1376 inches.

The 97 "Tournament" gun is made according to

The 97 Tournament gun is made according to specifications which meet the requirements of the most exacting trapshooters. Many of the leading trapshots of the world have made their most important winning scores with this famous gun. Its balance, length, drop and shape of stock have all been worked out as a result of long experience in suiting trapshooters.

The barrel is made of the celebrated Winchester rolled steel. It is 30 inches long, handsomely matted on the top and bored to shoot a close, even pattern with any trap load. The stock is made of handsome selected walnut, oil finished, with well shaped straight grip, checked. Checked selected walnut action slide handle, rubber butt plate. Drop at comb, 1¾ inches; drop at heel 1¼ inches; length of pull 14 inches. Variations in length of stock are allowed for a nominal charge.

The Model 97 "Trap" gun has a 30 inch rolled steel barrel full choke, matted; selected fancy walnut, hand made, oil finished stock, with straight or pistol grip, checked; action slide handle of fancy walnut, checked, and checked rubber butt plate. The comb is heavy and rounding. Drop at comb is 1½%" inches; drop at heel is 2½%" inches; length 13¾ inches. Modified choke or cylinder bore can be furnished. Any length or drop of stock may be had without extra charge.

Winchester Model 12 Hammerless Repeating Shotgun

REAUTIFUL in its lines, perfect in balance, the finished product of the best in modern guncraft, the Winchester Model 12 is today recognized by sportsmen everywhere as the standard hammerless repeating shotgun.

Whether in the field or at the traps, on the dusty plains. in the woods, on inland lake or damp salt marsh, hunters and transhooters have learned to place implicit confidence in this sure-five, sure-to-work, hard-hitting repeater.

The Winchester Model 12 is a take-down gun of nickel steel construction throughout. The two parts are locked firmly together by the simple "interrupted screw" system and can be separated or secured in an instant. Made in 12, 16, and 20 gauges and in a variety of styles and dimensions, this gun is adapted to every form of shotgun shooting. All three gauges make the famous Winchester perfect shot patterns and when choke bored are close, hard shooters. In Tournament and Trap grades, every barrel is targeted at the factory and its boring finished with the greatest care to insure perfect patterning of the shot.

All styles of the Model 12 carry five shots in the magazine and one in the chamber. The gun is cocked, the empty shell ejected, and the chamber reloaded by

the action of the slide handle.

The Model 12 in the standard 12-gauge, is made with a 30 inch full choke barrel, 1/2 pistol grip stock with medium comb, and action slide handle of plain walnut. The drop at comb is 111/6 inches: drop at heel 2½ inches; barrels 26, 28 or 32 inches long can be furnished, in full choke, modified choke or cylinder bore.

The standard 16-gauge and 20-gauge guns are furnished with 26 inch or 28 inch barrels, either full choke, modified choke or cylinder bore, and weigh

about 6 lbs.

The "Tournament" gun is made in 12 gauge only. It has a 30 inch, full choke barrel, with raised matted rib, especially adapted for trapshooting. The stock is of handsome selected walnut, oil finished, action slide handle of selected walnut, checked. Heavy, rounding comb. Drop at comb, 11/2 inches; drop at heel 134 inches. Length of pull 14 inches; weight about 71/2 lbs. May be had in any of several variations of lengths of stock and with cylinder bore or modified choke barrel.

The Model 12 "Trap" grade is made in 12, 16 and 20 gauge. The 12 gauge gun has a 30 inch barrel with raised matted rib, hand made stock of selected fancy walnut, oil finished, checked, with straight or pistol grip; action slide handle of fancy walnut, oil finished, checked. Drop at comb 1½ inches; drop at heel 1¾ inches; length of pull 14 inches.

16 and 20 "Trap" guns have 26 or 28 inch raised matted rib barrels, and weigh about 61/2 and 61/4 pounds re-

spectively.

"Trap" grade guns may be obtained in a great variety of specifications. The stocks are hand made and the options allowed are sufficient to satisfy the individual requirements of the most exacting shooter.

Winchester Ventilated Rib and Extension Action Slide Handle

TRAPSHOOTERS are vitally interested in any method of "getting onto" their targets more quickly. The Winchester Ventilated Rib is especially designed to give greater speed and accuracy in aiming. Its elevation above the gun barrel is scientifically correct.

It bridges the mirage or heat waves and thus gives a guide in aiming that has the highest possible visibility.

The Winchester Ventilated Rib is matted on the upper surface and secured to the barrel by piers that engage with the seats on the barrel. It is mechanically locked to the barrel, not brazed or soldered on. the minimum number of points of contact with the barrel consistent with strength.

Because of these features in the construction of this rib the expansion and contraction of the barrel due to the heat of frequent firing cannot cause it to take a

permanent set. Nor can the heated rib itself set up any strain in the barrel.

The Winchester Ventilated Rib is a scientifically perfect adjunct to the Model 12 "Pigeon" 'Trap", and "Tournament" grade shotguns. With the Winchester Model 12 Shotgun. Winchester Shells and the Winchester Ventilated Rib a shooter may be assured of getting the utmost precision out of his shooting.

The Extension Action Slide Handle (not illustrated) is made especially for trapshooting and is particularly liked by shooters who must

hold the extended hand rather close to the frame. Its ample size, nice proportions and good appearance commend it instantly, wherever it is shown. Matches the stock in color and checking, does not disturb balance, is interchangeable with standard slide handle and can be furnished separately.



Winchester Junior Trapshooting Outfit

A GAME that everybody can play—an absorbing pastime for every member of the family—a whole new field of sport, is contained in the trim, compact assembly of the Winchester Junior Trapshooting Outfit.

This outfit equips you completely for a modified form of trapshooting which can be enjoyed anywhere that shotgun shooting can be done. No preparation whatever is required—there is no laying out of the grounds. You simply open up the carrying case, take out the gun, shells, hand trap and targets, and fire away!

The Winchester .410 bore Family Shotgun is designed especially for use with the Winchester Junior Trapshooting Outfit. It has the finish and accuracy for which all Winchester guns are famous. Its dimensions are much smaller than those of the standard shotguns. Its .410 bore is about half that of the 20 gauge, so this light yet remarkably efficient gun has a light report and practically no recoil.

Packed complete in a strong, neat carrying case is the .410 gun, 150 shells, 100 clay targets, a fine strong hand trap, a cleaning rod and cleaning preparations. Extra targets and ammunition can be procured at small cost, and with proper care the outfit will last indefinitely.



The Complete Winchester Junior Traphooting Outfits

What You Can Do With Outfit

NO matter where you live—city, small town, farm—if you like good, wholesome sport in the open you can have it with the Winchester Junior Trapshooting Outfit.

At picnics and on boating and yachting parties it will

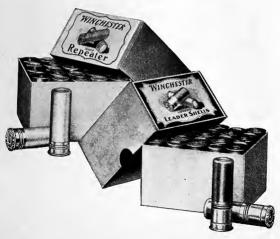
provide splendid enjoyment. It can be easily slipped in the back of the car or stowed away in a boat.

All sorts of informal contests can be arranged. Regulation shoots can be held and a prize offered to the final winner. These contests will hold the greatest interest for both participants and spectators.

Many a famous trap shot keeps in form by practicing at targets thrown with a hand trap. This sort of shooting is not only a pleasure in itself, but also gives the best sort of practice for hunting.

Winchester Loaded Shells

IN testing a shell three points are considered: density, uniformity of pattern, and penetration. If the pattern thrown by the shell is deficient in any of these essentials it is not a good pattern and will not give good results at the traps.



A pattern of uneven spread is known as "patchy." Inferior guns and shells often throw such a pattern. It is the most aggravating of all troubles that can beset a trapshooter, for it nullifies his skill.

Winchester shot patterns are famous for their even spread and hard-hitting delivery—insured by the use together of Winchester Shotguns and Winchester Loaded Shells. No target can get through a properly aimed Winchester pattern.

Winchester Shotguns and Loaded Shells are made expressly for each other. The gun barrels are bored to bring out the highest pattern possibilities of the shells.

Winchester shells are made in these smokeless

powder loads:

Leader—Loaded with smokeless powder. Extra long patented corrugated head with four corrugations. Used by world's champion trapshooters. The best loaded shell at any price. Red in color.

Repeater—Smokeless powder, patent corrugated head, three corrugations. Loaded with the same care as the Leader, yet comparatively low priced. Yellow in color.

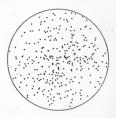
Winchester Shells in black powder, for hunting are:

New RIVAL—Carefully loaded with the best grade of black powder. Patented corrugated head, one corrugation. Ample strength to withstand reloading. Blue in color.

Nublack—Black powder, patented corrugated head, two corrugations. Clean, fast and uniform in shooting. Yellow in color.



Mrs. L. G. Vogel, Detroit, Mich., one of the leading women amateur trapshots in the United States



A WINCHESTER PATTERN (about 312 pellets)

THE above was made with a Winchester Ventilated Rib Trap Gun, 30" Full choke barrel with the Standard Repeater Trap Shell, 12 ga. 3 drams powder, $1\frac{1}{4}$ – $7\frac{1}{2}$ ch., shot in a 30" circle at a distance of 40 yds., and is about a 73% pattern. A full choke pattern is 70 to 75% of the charge of $1\frac{1}{4}$ oz., which contains 431 pellets of $7\frac{1}{2}$ ch. shot. 70% is Full choke or 300 to 325 pellets—modified choke, 55% to 65%, or about 260 pellets, cylinder bore about 45%, or 195 pellets.

Every club should have large copies of this form placed in prominent places inside and outside of club house where beginners and visitors can observe it readily.

VISITORS WELCOME

BUT-

STOP! LOOK! LISTEN!

- THAT all who attend our shoots may feel perfectly safe and that visitors may feel free to participate in our sport we request your reading and observance of this notice.
- ONE shell is allowed in your gun when shooting single targets, and two when shooting doubles. Three for triples. Never place more in your Winchester Magazine.
- PLACE shell or shells in your gun only when standing in your proper place upon the firing line, and not then until your gun is pointed in the direction of the trap house and you are sure no one will come out of the trap house.
- LET your gun remain open and be sure there is no shell in it when changing from No. 5 to No. 1 position or from No. 1 to No. 5.
- ONLY the most careless and thoughtless person will ever point a gun in the direction of anyone. Never handle a gun without first making sure there is no shell in either the barrel or magazine. Never pull the trigger in the house.
- ONE should never take a gun out of the case or go to the firing line without looking through the barrel in order to make sure there is no obstruction therein for this is the cause of most all barrel bursting.
- KEEP quiet when upon the firing line or near the score board or puller. Never do anything to disconcert the shooter, puller or scorer, and never stand in front of the referee or puller or between the shooter and score board.
- LET the referee's decision be final. Do not question a bird he has called, especially your own, for the recoil of the gun makes you least competent to judge your own target and the wads frequently look like pieces of the target to the one behind the gun.
- IF you are late getting to your place in the firing line, when your squad is called, you not only annoy your squad members, but materially lessen your own chances of making a good score. Be prompt!
- SHOOT at a fair target, for if you call pull and refuse to shoot the referee has no alternative but to call it "lost" and have it scored a miss.
- TARGETS that leave the trap broken or targets that take an extreme variation of angle or height are not considered fair targets, and should be refused. The referee should call "no target" when a shooter fires at a broken target and the shooter must shoot another target. You must abide by the result, if you shoot at a whole target whether it is fair or unfair.
- EXPERIENCE is the best teacher but if you will read these precautions and learn the rules of trapshooting as published by the American Trapshooting Association, 460 4th Ave., New York, your chances of becoming an expert will be greatly enhanced.
- NEVER fail to be courteous and lend assistance to a beginner. Never let him start out alone. Your protection as well as that of your friends demands that you see that the proper instruction is given to those wishing to learn. (The Shooting Promotion Division of the Winchester Repeating Arms Company, New Haven, Conn., will furnish any assistance desired.)

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WINCHESTER